Installation Instructions

Ventilation Override Kit

Used with 3 to 10 Ton Packaged Units with ReliaTel™ Controls

Model Number: BAYVNOR001*

Used With: Precedent™ 3 to 10 Tons with ReliaTel™ controls and economizer (powered exhaust optional)

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe

NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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⚠ WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

⚠ WARNING

Personal Protective Equipment Required!

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards. Before installing/servicing this unit, technicians MUST put on all Personal Protective Equipment (PPE) recommended for the work being undertaken. ALWAYS refer to appropriate SDS sheets and OSHA guidelines for proper PPE. When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection and handling recommendations. If there is a risk of arc or flash, technicians MUST put on all necessary Personal Protective Equipment (PPE) in accordance with NFPA70E for arc/flash protection PRIOR to servicing the unit. Failure to follow recommendations could result in death or serious injury.

⚠ WARNING

Follow EHS Policies!

Failure to follow instructions below could result in death or serious injury.

- **All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.**
- **Non-Trane personnel should always follow local regulations.**

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General Information

- An options board (BAYABRD001*) must be installed in the unit for this accessory to operate.
- An economizer or motorized damper must be installed and functional before attempting to install a ventilation override kit.
- This accessory provides overriding external control of the Precedent™ rooftop unit indoor fan, the economizer damper position and the power exhaust accessory (if installed). Purge, pressurize and exhaust functions are enabled with this accessory.

Inspection

- Unpack all components of the ventilation override kit.
- Check carefully for any shipping damage. If any damage is found it must be reported immediately and a claim made against the transportation company.

Parts List

- 1 - Length of 1/8" X 3/4" foam gasket tape
- 2 - #8-32 Screws for mounting LTB
- 2 - Wire Tie, Standard
- 5 - Wire Tie, Pop-In Anchor Type
- 1 - Wire Harness with Low Voltage
- Terminal Board, #4366-3302, for CO_2 & Ventilation Override
- 1 - Plastic Bushing for 1.09 diameter hole
- 1 - Plastic Bushing for 0.88 diameter hole
- 1 - Wiring Diagram Adhesive Label
- 1 - "VNOR Kit Has Been Installed"
- 1 - RTOM Adapter Wire Harness
- Label

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Installation

⚠ WARNING

Hazardous Voltage w/Capacitors!

Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. Verify with an appropriate voltmeter that all capacitors have discharged.

For additional information regarding the safe discharge of capacitors, see PROD-SVB06A-EN

1. Remove access panels as shown in Figure 3 and Figure 4.

Note: *BAYCO2K001*, BAYCO2K003* and BAYVNOR001* contain identical harnesses. If at least one of these accessories has previously been installed, skip to Step 3.*

Note: *Units with reheat dehumidification do not require harness 4366-3302, the connections for ventilation override are already present.*

2. Install CO_2 and ventilation override wiring harness 4366-3302 in the unit according to wiring diagram 4366-1048 and the following directions. Refer to the unit wiring diagrams inside the compressor / control box access panel for location and identification of components.

Note: *On all units, except those equipped with a plenum fan, Y/TSC120F, Y/THC074, Y/THC092-120E/F, Y/TZC072-120, YZC 072-120, D/WHC074-120H & WSC120H models, check the indoor/outdoor divider panel for a knockout just below the control box. If knockout exists, remove it in preparation for installing the harness. If it does not exist, use a Greenlee type punch to install a 7/8" diameter hole in the location shown. See Figure 2*

Note: *For Y/THC092-120E, Y/THC120F, Y/TZC120, D/WHC074-120H & WSC120H models, use the hole on the left wall of the high voltage control box compartment for harness routing as shown in Figure 4.*

a. Place the harness provided with the kit into the unit control box and install the low voltage terminal board (LTB) attached to the kit. Place the LTB adjacent to the similar LTB in the unit control box and secure with the 2 # 8 screws provided using the two existing 0.136" diameter holes in the control box. See Figure 2. For Y/TSC120F, Y/THC074, Y/THC092-120E/F, Y/TZC072-120, D/WHC074-120H & WSC120H models, see Figure 4.

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b. Connect wire 100EE from the kit harness to the existing LTB, terminal 3. See Figure 1.

c. Connect wire 101YY to the low voltage common terminal on TNS1. For T/YHC092-102E and D/WHC120H connect wire 101YY to the low voltage terminal block in the upper left corner of the control box.

d. Route the remainder of the wires in the kit harness through the control box pull them through the large hole in the far left side of the bottom of the control box and then through the hole made in the divider panel in step "2a" above. Take the 0.88" diameter plastic bushing provided and place it around the wires and snap it into the hole to protect the wires. For Y/TSC120F, Y/THC074, Y/THC092-120E/F, Y/TZC072-120, D/WHC074-120H & WSC120H units, route the remainder of the wires in the kit harness through the hole in the left wall of the high voltage control box compartment.

e. If a ReliaTel™ options module (RTOM) has not been installed in the unit (accessory BAYABRD001*),first install the RTOM accessory. Then connect 5P6 to 5J6.

Note: *Some RTOM versions have a 5J6 connector which only accepts bare wire. In this case remove plug 5P6 from the kit harness, strip the wire ends and connect individual wires 191A, 194A and 195A to the screw terminals of 5J6 per the alternate RTOM connection shown in Figure 1.*

f. If a power exhaust accessory has been installed go to next step. If a power exhaust accessory has not been installed, remove knockout from the indoor top coil blockoff (6 to 10 ton units only). (Skip this step for T/YHC092-120E, Y/THC120F, Y/TZC120, Y/TZC072-120, D/WHC074-120H and WSC120H).

g. For T/YSC072-102E, T/YSC120F, T/YHC047-072E, Y/THC074, T/YHC092F, T/YZC048-102, WSC060H, D/WHC048-060H & WSC072-120E/H units, route wires 150A and 151A (multi-conductor cable) along the bottom of the raceway and then through the top coil blockoff knockout (along with power exhaust motor wires, if present). Place the 1.09" plastic bushing around the cable and in the knockout hole to protect the cable if a bushing is not already present. See Figure 3.

h. For T/YSC036-060G, WSC036-048H, D/WHC036H, T/YHC036-37E, & T/YZC036, Y/TZC072-120, route wires 150A and 151A (multi-conductor cable) along the bottom of the raceway and then between the roof and coil block off in line with one of the roof ribs. See Figure 3.

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i. For T/YHC092E-120E and D/WHC120H units, route wires 150A and 151A (multi-conductor cable) over bracket in top coil blockoff. See Figure 4.

j. Connect plug 6P8 to the jack marked "DCV" on the economizer module per the wiring diagram if DCV terminals are available. If terminals are not available secure plug 6PB to prevent damage.

k. Install foam gasket tape around wires at plastic bushings to seal barrier penetrations so that air and moisture leakage does not occur.

Note: *Use provided wire ties to secure excess wiring and prevent wires from contacting sharp edges or hot surfaces.*

3. Apply provided CO_2 and ventilation override wiring diagram label next to the main unit wiring diagram label.
4. Apply "BAYVNOR Kit Has Been Installed" label next to the main unit wiring diagram label.
5. Make field wiring connections from customer's fire panel or other control to enable desired external ventilation control per CO_2 and ventilation override wiring diagram.
6. Route low voltage external field wiring along with and secure to existing low voltage zone sensor or thermostat wiring.
7. Replace any filters that were removed in Step 1 of installation instructions.

Unit Close up

Replace the access panels that were removed in Step 1 of installation instructions.

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Ventilation Override Operation and Settings

Three ventilation modes are available with ReliaTel™ through use of an options module (RTOM) and economizer (ECA) with power exhaust. Table 1 is a list of each mode and what happens during each. CO_2 wiring is addressed with the CO_2 accessory.

Table 1. Ventilation Override Modes

	Fan Forced	Compressors may run?	OK to heat (gas/elect.)?	Economizer position?	Power Exhaust?
Pressurization	ON	No	No	100%	Off
Purge	ON	No	No	100%	On
Exhaust	OFF	No	No	0%	On

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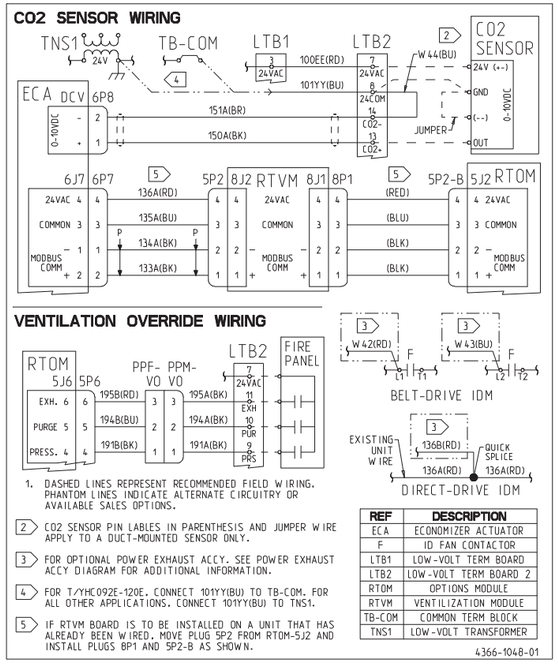
Figure 1. CO_2 and Ventilation Override Wiring



REF	DESCRIPTION
ECA	ECONOMIZER ACTUATOR
F	ID FAN CONTACTOR
LTB1	LOW-VOLT TERM BOARD
LTB2	LOW-VOLT TERM BOARD 2
RTOM	OPTIONS MODULE
RTVM	VENTILIZATION MODULE
TB-COM	COMMON TERM BLOCK
TNS1	LOW-VOLT TRANSFORMER

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Figure 2. Wiring Route Location

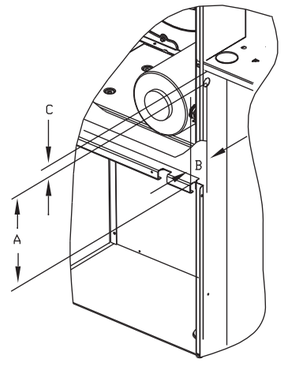

Table 2. Dimensions

Tonnage	A Dimension	B Dimension	C Dimension
T/YSC036-060 WSC036-048H, D/WHC036H T/YHC036-037E T/YZC036	3 3/4"	5 5/8"	—
T/YSC072-120 WSC060H, D/WHC048-060H WSC072-102E/H T/YHC047-072E T/YZC048-060	—	2 1/8"	2"

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Figure 3. Wiring Install - All units except T/YHC092-120E, T/YHC120F, T/YZC120 & D/WHC120H

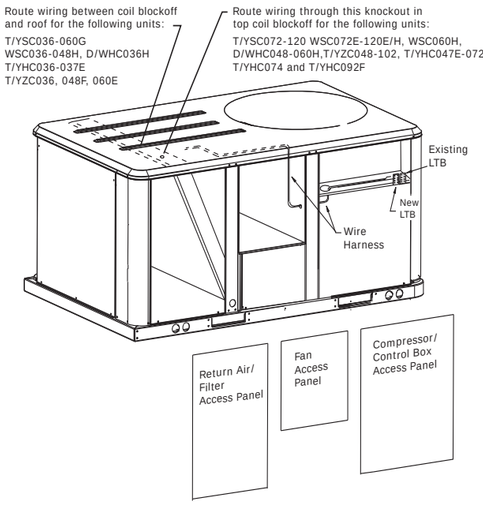

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Figure 4. Wiring Install - T/YHC092E-120E, Y/TZC 072-120 & D/WHC120H

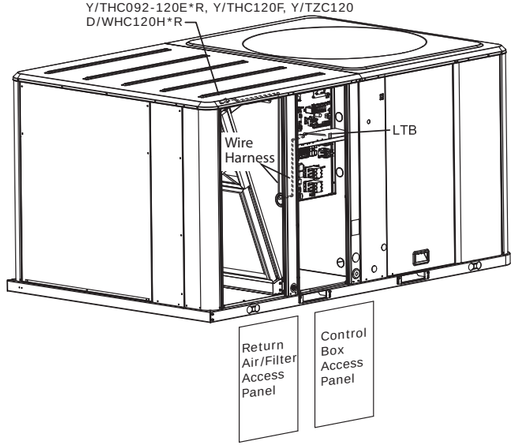

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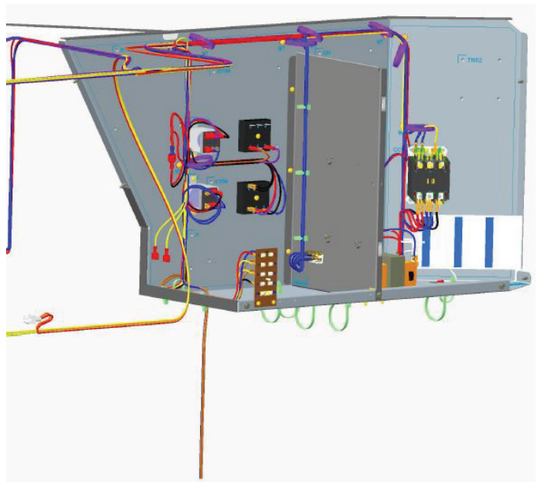
Figure 5. T/YSC036-060G, WSC036-048H, D/WHC036H LTB Position



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